

**Memorandum in Support of the Findings and Recommendations
of the MTBE and Gasoline Storage Task Force – January 31, 2009**

The MTBE Task Force was established by Harford County Council Resolution 27-08 of June 3, 2008 to determine if Methyl tertiary-Butyl Ether (MTBE) is currently used as a gasoline fuel additive. If MTBE was found to no longer be used as a gasoline fuel additive, the Task Force was charged with commencing a study of the new state regulations regarding the storage of gasoline and recommending to the County Council whether the current county law requiring motor vehicle fueling stations to be located only where the adjoining properties are served by public water systems should be modified or updated. Each member of the County Council appointed a Task Force member. The Task Force met from July 2008 through January 2009 and gathered information through public testimony and research. This report presents conclusions and recommendations, as well as supportive evidence, non-supportive evidence, and residual concerns. Additional details, discussion, and rationales may be found in a separate report submitted by individual members of the Task Force. This separate report states the views of the co-authors and do not necessarily reflect the views of the remaining Task Force members. This Memorandum, and it alone, constitutes the findings and recommendations of the Task Force as a whole.

County Council Resolution No. 27-08 Task #1: MTBE Use as a Gasoline Fuel Additive in Harford County.

Conclusion: MTBE is currently not used as a gasoline fuel additive in Harford County.

Supportive Findings:

- ❖ Physical testing of storage depots and retail distributors by the Maryland Comptroller Motor Fuel Testing Lab verified that MTBE has not been present in gasoline sold in Maryland since at least January 2007.
- ❖ State regulators confirmed that MTBE is not present in Maryland gasoline fuel supplies.
- ❖ The major conveyor of petroleum products to the State of Maryland (*Colonial Pipeline*) confirmed that shippers have voluntarily ceased transporting MTBE-containing products in its pipeline due to the significantly increased liability that MTBE presents when released into the environment from bulk or retail facilities.

Non-supportive Findings: None.

Residual Concerns:

- ❖ Although unlikely to be reintroduced, it should be understood that the decision to stop using MTBE as a gasoline additive was a voluntary decision by the petroleum industry.
- ❖ MTBE is not banned in the State of Maryland.
- ❖ Advocates of the National Petroleum Refiners Association urged the Maryland General Assembly in the past to oppose a ban on MTBE.

- ❖ While the Colonial Pipeline does not anticipate further shipments containing MTBE, they are not prohibited from shipping the product to or through Maryland.
- ❖ Oxygenated reformulated gasoline is required to be used in Harford County to meet Federal Clean Air Act standards. Ethanol is currently the MTBE replacement.
- ❖ Ethanol is not as effective as MTBE in reducing ozone precursors.

County Council Resolution No. 27-08 Task #2: Analysis of State Regulations on the Storage of Gasoline and Recommendations to the Council on Updating County Law.

Conclusions: There was careful consideration of the issues by the members of the MTBE Task Force, with an attempt to balance the necessity of a clean source of drinking water with citizens' expectation of easily accessible motor vehicle fuel. The former requires a storage system with reliable product containment, and if that containment fails, a reliable, precise and timely method of detecting that failure. The latter relates to the benefits derived from repealing the current law, namely a free market supply and demand system.

Conclusion #1: Overall, from a regulatory standpoint, the current design standards of the State regulations for new, modified or upgraded underground storage tanks (USTs) and piping systems appear to be protective of surrounding private drinking water wells. The protective measures for piping (double-wall construction, liquid tight containment sumps) are very protective. The protective measures for USTs (double-wall construction, overfill protection) are protective, however, the requirement for double wall construction only became effective January 12, 2009. Therefore, the Task Force is concerned that insufficient time has passed to evaluate the effectiveness of the current Maryland regulations. The change in oxygenates (MTBE to ethanol) creates uncertainty in predicting future performance of the new systems. (See Recommendations #1, #2, #3 and #4)

Conclusion #2: Overall, the State regulations for release detection (interstitial release detectors, monitoring wells and inventory controls) are protective, but suffer shortfalls. The interstitial release detectors are a good method but there have been reports in the media of maintenance and operator reaction difficulties, as illustrated in the Jacksonville, Maryland case. Monitoring wells can be an effective way to detect releases, but currently are monitored only semi-annually. Inventory control methods are prescribed in the regulations, but are an inaccurate and imprecise indicator of leaks. Inventory control methods may not detect releases even while remaining in statistical compliance. (See Recommendations #1, #2, and #4)

Conclusion #3: Currently, reformulated gasoline poses two inherent problems, air pollution and, if not contained, groundwater contamination. The Task Force remains concerned that the replacement oxygenates for MTBE, mainly ethanol, have not been thoroughly evaluated in terms of their potential for release in the vapor phase, gasket deterioration, benzene groundwater plume extension, and ground level ozone precursors. Further discussion is provided in the separate report submitted by the Task Force members whose names appear on that document. (See Recommendations #1, #3 and #4)

Conclusion #4: The Task Force considered the uncertainty of plume migration in the fractured bedrock aquifer underlying most of Harford County. Remediation of groundwater in fractured bedrock can be challenging. Permitting motor vehicle fueling stations as of right according to zoning classification, such as VB, does not take into account the multiple geological-hydrogeological variables influencing plume migration in fractured bedrock aquifer areas. The Task Force also considered the (1) risk to human health and the environment resulting from deficiencies in the performance and design standards of UST systems and (2) residual risk, i.e., the remaining potential for harm to persons, property or the environment that would remain after all possible efforts to reduce predictable hazards. In addition, the Task Force considered the current impact of existing cases on communities without alternative water supplies. Further discussion is provided in the separate report submitted by the Task Force members whose names appear on that document. (See Recommendations #1 and #3)

Conclusion #5: There is still room for significant improvement in the State regulations for release detection. While the regulations are reasonably protective, there is still an element of risk and residual risk. Although current State regulations provide an acceptable level of protection from a regulatory perspective, the Maryland FY08 compliance rate with these regulations ranged from 48% to 59% (depending on the category of the system). Admittedly, many of these non-compliance issues did not involve an immediate threat to public health and the environment, but they may be an indicator that current regulations, while protective as written, may not be sufficiently protective in practice. (See Recommendations #1 and #4)

Conclusion #6: The Task Force did not address motor vehicle fueling facilities that may, now or in the future, dispense non-petroleum based fuels such as compressed natural gas, hydrogen, or propane. The Task Force is not recommending that such facilities be excluded from areas serviced only by private drinking water wells without further study. Also, the Task Force noted that current County law and State regulations do not prohibit farm-fueling operations.

Conclusion #7: The Task Force determined that even though the current State regulations for new motor vehicle fueling stations provide an acceptable level of regulatory protection, there are still deficiencies in performance and design standards that pose an unquantifiable level of risk and residual risk to human health and the environment. In the event that a demonstrated benefit outweighing these risks emerges, the Task Force recommends additional siting, monitoring and oversight requirements (*minimal setbacks, hydrogeological studies, increased monitoring and community participation in the planning process*) to mitigate these risks. The recommended additional measures are discussed in the separate report submitted by the Task Force members whose names appear on that document.

Recommendations:

Recommendation #1: The current County law that prohibits the siting of motor vehicle fueling stations where the adjoining properties are not served by public water systems should not be modified by the County Council, at this time. (Also see Conclusions #1, #2, #3, #4, #5)

Supportive Findings:

- ❖ 28 of the 77 current open remediation cases in Harford County are in the high risk groundwater use area as of January 21, 2009.
- ❖ As of December 2008, 12 remediation cases involved doubled-walled USTs and 15 involved double-walled piping.
- ❖ A major portion of the high risk groundwater use area in Harford County is underlain by a fractured bedrock aquifer.
- ❖ There is no short-term alternative water supply for most areas of Harford County in the high risk groundwater use areas.
- ❖ Benzene, a known human carcinogen found in petroleum products, has contaminated private wells in Harford County.
- ❖ There was demonstrated public opposition by several citizens to motor vehicle fueling stations in high risk groundwater use areas in presentations before the Task Force.
- ❖ The current regulations have not been modified to address the use of ethanol as an oxygenate.
- ❖ There is inadequate compliance with the current regulations.

Non-supportive Findings:

- ❖ Maryland State regulations are among the strictest in the nation.
- ❖ The majority of past off-site private well contaminations were due to MTBE, which, as stated above, is no longer used as an additive in gasoline fuel.
- ❖ Current law limits expansion of motor vehicle fueling stations that are nonconforming uses in high risk groundwater use areas. This limits investor interest in upgrading stations in those areas.
- ❖ Retailer Royal Farms, in their presentation before the Task Force, felt there may be consumer demand for motor vehicle fueling stations in high risk groundwater use areas. There was no other testimony regarding consumer demand or other need for motor vehicle fueling stations in the restricted areas.

Residual Concerns:

- ❖ The newest Maryland State regulations have not been in effect long enough to fully evaluate their effectiveness in protecting human health and the environment.
- ❖ The change in oxygenates creates uncertainty in predicting the future performance level of the new underground storage tank systems and their associated piping.
- ❖ There is a high rate of non-compliance (48%-59%) with existing regulations.
- ❖ When private wells are contaminated by third parties, and where the levels do not exceed State action levels or Maximum Contaminant Levels, owners must bear the cost if they choose carbon filtration and/or alternative sources of drinking water as a protective measure.

Recommendation #2: It is highly recommended that the County Council encourage existing motor vehicle fueling stations in areas not serviced by a public water system to upgrade their UST systems to 2009 State standards to the maximum extent allowable under current zoning code. (Also see Conclusions #1, and #2)

Supportive Findings:

- ❖ The Current County law does not prohibit nonconforming motor vehicle fueling stations in high risk groundwater use areas from upgrading their existing system.

- ❖ A majority of open remediation cases in Harford County involve existing facilities that are only required to upgrade to 1998 Federal standards.

Non-supportive Findings:

- ❖ None.

Residual Concerns:

- ❖ Retailers may be concerned that upgrade without expansion of retail capacity and renovation is not economically feasible.
- ❖ There is greater potential risk to private well water supplies posed by motor vehicle fueling stations in high risk groundwater use areas if they are not upgraded.

Recommendation #3: The County Council should not allow motor vehicle fueling stations in areas not served by public water systems regardless of zoning district. (Also see Conclusions #1, #3, and #4)

Recommendation #4: The County Council should periodically review the current law at a minimum of every five years with the next review to occur by 2014. (Also see Conclusions #1, #2, #3, and #5)

Respectfully submitted,

Michael Elder	At large
Glenn Dudderar	District A
David Klunk	District B
Dick Schwanke	District C
David Jones	District D
Deborah Wrobel	District E
Roman Ratych	District F